

**Report on Evaluation Activities  
For the Nursing Home Quality Initiative Pilot  
October 17, 2002**

Executive Summary

Four different studies and monitoring activities were used to evaluate the Centers for Medicare & Medicaid Services' Nursing Home Quality Initiative (NHQI) Pilot. The major findings from this evaluation are listed below:

**The NHQI was successful in promoting quality improvement activities among nursing homes.**

- As a result of the NHQI, over half of the nursing homes (52%) in the six pilot states requested quality improvement technical assistance from the Quality Improvement Organizations (QIO).
- The vast majority, 88% of nursing homes had heard of the NHQI.
- Over three-quarters of nursing homes (78%) reported making quality improvement changes during the NHQI pilot and 77% indicated that the NHQI was, in part, responsible for their decision to undertake these activities.

**The NHQI increased people's seeking of nursing home quality information.**

- Phone calls to 1-800-MEDICARE concerning nursing home information more than doubled during the pilot roll-out and visits to Medicare.gov's nursing home quality information for the six pilot states increased ten fold.

**Users of the quality information on-line were highly satisfied.**

- Web users said the information was clear, easy to understand, easy to search and valuable. On a scale of 0 to 10, over 40 % of web users scored the information a 10 on these dimensions and approximately 70 % gave the information an 8 or higher.

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This evaluation of the Nursing Home Quality Initiative (NHQI) Pilot was designed to assess the pilot's implementation and provide information to the Centers for Medicare & Medicare Services (CMS) which can be used to guide NHQI national implementation. This report provides results from the research conducted to date.

**Background**

The Centers for Medicare & Medicaid (CMS) and its Quality Improvement Organizations (QIOs) have promoted the use of publicly reported nursing home quality measures in six states, from April through September, as part of the nursing home pilot project. The Pilot gave CMS the opportunity to gain experience in three areas in preparation for the national Initiative:

- Selection, validation, production, and posting to the Web site of new nursing home quality measures
- Promoting awareness and use of the new measures to stimulate quality improvement
- Providing assistance to nursing homes working to improve on the measures

The assessment focuses on three audiences. The first is the nursing home facilities themselves. The second is comprised of information intermediaries. Information intermediaries are generally health care professionals with whom we work to carry the NHQI message (e.g., discharge planners, primary care physician offices, and ombudsman etc.). The third audience is consumers. Consumers are caregivers and current or future nursing home residents.

**Research Questions**

The evaluation explored five research questions.

- 1) How did the communication activities influence the nursing homes?

One goal of the communication activities is to influence nursing homes to undertake improvement activities.

- 2) Were the target audiences reached?

We conducted research to assess whether the communication activities reached the target audiences.

- 3) Did the campaign increase people's seeking of nursing home quality information?

The campaign promoted “information seeking” behaviors for the target audiences. It encouraged consumers to access detailed nursing home quality information through [www.medicare.gov](http://www.medicare.gov) and 1-800-MEDICARE. We assessed whether these sources of information experienced an increase in use.

4) What were web-users’ reactions to the nursing home quality information?

To continually refine the information provided, it is important we understand the public’s response to how the information is currently reported. Therefore, we conducted research to assess visitors’ satisfaction with the quality information on the Nursing Home Compare Web site.

5) How did the communication activities influence intermediaries?

Preliminary research has shown that discharge planners and primary care physicians might be willing to direct beneficiaries and their families to nursing home quality information, provided that they are not asked to recommend any specific facilities. We want to know if intermediaries actually use the information provided to them in this way.

## **Research Results**

During the pilot, we were able to launch projects designed to reach nursing homes. Our experiences are helping us refine activities to reach information intermediaries and consumers. Here we present information on five research questions by reporting on: 1) program and media monitoring; 2) the survey of nursing homes; 3) help-line and web inquiries for the quality information; and 4) an online satisfaction survey.

### **Program and Media Monitoring**

Program and media monitoring was used to assess levels of program implementation and track levels of nursing home and media reaction to the program. The CMS provided the QIOs with program and media tracking tools, also referred to as diaries.

Program monitoring consisted of tracking events designed to improve program outreach, attendance at meetings designed to improve partnerships, the fulfilling of materials requests, and the number of additional requests for assistance nursing homes made of QIOs.

Over half (52%) of the nursing homes within five of the pilot states for which we have data (one report is yet outstanding) responded to QIO outreach by requesting quality improvement assistance. This suggests considerable interest from the nursing home industry to participate in QIO-sponsored quality improvement activities.

Table 1 suggests that the QIOs were active in promotional activities. This type of tracking and summary makes it difficult to analyze the quality of these activities. Focus groups with QIOs, however, suggest that nursing homes were among the easiest target

audiences to reach with events, while practitioner offices were considered difficult. The QIOs varied in their assessment of the difficulty in reaching and working with hospital discharge planners. The QIOs also reported that the materials most often distributed were consumer brochures, notepads, and contact cards.

Figure A reports the number of media placements achieved on the local level. From the week before the pilot launch until the middle of August, there were over 300 news reports on the NHQI. As expected, media placements peaked during the week of the pilot launch. These 300 media placements resulted in well over 20 million media impressions (Figure B). This represents an underestimate of media impressions as ratings information was missing for 87 media placements. Clearly, consumers and industry stakeholders had an ample opportunity to be exposed in the six pilot states.

Table 1: Promotional Program Activities During Pilot Phase

	April-May	May-June	June-July	July-August	Total
Events Conducted (attendance)	34 (1,081)	12 (1,091)	22 (710)	10 (648)	78 (3,530)
Partner Meetings	52	15	19	21	107
Fulfilled Materials Requests	212	11,548	5,035	124	16,919

The program and media monitoring clearly suggest that the NHQI engaged the nursing home industry in promoting quality improvement activities. It also demonstrates considerable activity in disseminating the quality measure information.

### **Survey of Nursing Homes**

CMS contracted with the Barents Group, a division of KPMG Consulting, and McGuire Research Group to administer a CATI telephone survey to a sample of nursing facility staff responsible for quality improvement (QI) efforts. The purpose of the survey was to assess nursing home awareness of the NHQI and possible NHQI impact on nursing home quality improvement activities. Two hundred and fifty nursing facilities were surveyed between August 21 and August 30, 2002, including 42 in Maryland, 42 in Rhode Island, 42 in Ohio, 42 in Florida, 41 in Colorado, and 41 in Washington. Nursing homes involved with QIOs in intensive QI activities (~10 per state) were excluded from the sample. In the survey, a series of screener questions were used to identify and then survey the individual in the nursing facility responsible for quality improvement. Half of the respondents were administrators, one third were Directors of Nursing, and the remaining 17% had other titles.

The following summarizes survey results as a preliminary evaluation of NHQI impact. The evaluation begins with the awareness that nursing home facilities have of the NHQI, the Quality Improvement Organizations (QIOs), and the role of the QIOs in the NHQI. It then proceeds to participation in QIO-related activities, and concludes with an examination of the more concrete steps that nursing home facilities have taken with their QI efforts.

### *Awareness of NHQI*

The National Nursing Home Quality Initiative has been successful at capturing the attention of those in nursing facilities who are responsible for quality improvement. The vast majority of nursing homes surveyed (88%) were aware of the NHQI. Similarly, 87% said that they were familiar with the “Nursing Home Compare” application available at the [www.medicare.gov](http://www.medicare.gov) website.

Nursing homes were also familiar with the major vehicles used to communicate the NHQI. Over four in five of the nursing homes surveyed (82%) said that they saw or heard something about the newspaper advertisements placed by CMS earlier this year. Similarly, 83% were aware of the QIOs and over half (52%) reported that they were very or fairly familiar with the QIO’s role in the NHQI.

### *Materials Dissemination and Type of Contact between QIOs and Nursing Facilities*

Over half of the nursing homes surveyed (59%) recalled receiving some form of information from their state’s QIO. The types of information that nursing homes most frequently recall were the *Publicly Reported Quality Measures Resource Manual* (36%), materials on clinical processes such as pain management (36%), and information on the role of the QIO in the NHQI (36%).

### *QIOs as a Source of Technical Assistance*

Fifteen percent of nursing homes listed QIOs as the “best source” for technical assistance, second only to the 49% that listed a central administrative office as the “best source” for quality improvement technical assistance. Other “best sources” included CMS (4%), State Survey and Certification Agency (5%), trade associations (8%), independent consultants (5%), and in-house or internal consultant (5%).

Nursing facilities that were contacted directly by their state QIO were significantly more likely to say that the QIO was their best source of technical assistance. Among the 20% of nursing facilities in the survey where the respondent recalled being contacted by the QIO in-person or by telephone, 33% said that the QIO was their best source of technical assistance. This survey result suggests that as QIOs contact more nursing homes over time, their standing as a source for QI technical assistance should increase.

### *QIO-Sponsored Workshops*

An important means by which nursing facilities can participate in the NHQI is by attending a QIO-conducted workshop. Just over half of nursing homes (51%) were aware of QIO-sponsored workshops. An additional six percent of nursing homes were unfamiliar with their QIO but, nevertheless, knew about these workshops.

Over a third of the nursing homes surveyed (39%) said that someone from their facility attended one of the QIO workshops. Most nursing facilities that were aware of the workshops had someone attend and participate (70%).

### *Quality Improvement Activities*

Three in four nursing homes surveyed (78%) said that their facility changed, or planned to change, their quality improvement activities. The most commonly reported types of changes made were unit-level clinical processes (46%), MDS process (42%), and intake process (41%). Overall, 77% of nursing homes said the NHQI was somewhat, fairly, or very influential in the changes they made. Barents developed a summative change measure. On this measure, nursing homes made an average of 4.0 changes out of a possible ten changes. Nursing homes that believed the NHQI was influential made, on average, more quality improvement changes in the past six months (4.6 to 3.6,  $p < .05^1$ ).

There is further evidence that the QIO-sponsored workshops are contributing to the extent of changes being implemented by nursing homes. Attendance at QIO-sponsored workshops was strongly and positively associated with the number of quality-improvement changes. Nursing facilities that sent a representative to a QIO-sponsored workshop made an average 4.4 changes compared with only 3.6 changes for all other nursing homes ( $p < .05$ ). Facilities that received QI training were more likely to report changes to their intake process (59% versus 41%), for example, their MDS process (57% versus 42%), and their unit level clinical processes (62% versus 46%).

### *Interaction with Information Intermediaries on Quality Improvement*

The survey results suggest that the strategy implemented by CMS and QIOs to work with information intermediaries is beginning to see success. Hospitals are among the more important referral sources for many nursing facilities and were among the information intermediaries specifically targeted by the QIOs and CMS. One in three nursing facilities (35%) reported having increased discussions with referral sources regarding quality improvement over the past six months. This increased discussion appeared to be associated with QI-related changes. Nursing facilities reporting more QI-related discussion with referral sources made an average of 5.1 changes compared with only 3.3 changes among all other nursing facilities ( $F = 25.4$ ,  $p < .01$ ). Moreover, those nursing homes that report more discussion with referral sources were also far more likely to say that the NHQI had been influential in their QI-related activities ( $p < .05$ ). While these

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<sup>1</sup>  $P < .05$  suggests the differences in the survey were statistically significant; the differences were not observed by chance.

findings do not provide direct evidence for the NHQI, the pattern of results is consistent with what one would expect given the prominent role of information intermediaries in the NHQI strategy.

Inquiries to CMS via 1-800-MEDICARE and [www.medicare.gov](http://www.medicare.gov).

To assess whether the pilot project increased people's seeking of CMS' nursing home information, we tracked the number of nursing home inquiries on 1-800-MEDICARE and the number of visits to the [www.medicare.gov](http://www.medicare.gov) that included searches for nursing homes.

The launch of the nursing home pilot increased the number of people actively seeking nursing home information from Medicare. Inquiries to both 1-800-MEDICARE and the Nursing Home Compare Web site increased during the launch month.

In Figure C, the number of phone calls to 1-800-MEDICARE on nursing home topics is shown. The chart compares the six pilot states with all other states in the country and calls made in 2002 with calls made in 2001. In both pilot and non-pilot states phone calls concerning nursing homes increased at the end of 2001 and continued at a slightly higher rate in 2002. In the pilot states, there was a considerable increase in phone calls during April and May 2002 reflecting the launch of the NHQI.

In Figure D, visits to Nursing Home Compare where searches for nursing homes in the six pilot states were conducted are compared to visits searching for nursing homes in all other states and territories. A visit was counted whenever someone visited Nursing Home Compare and searched for nursing homes within a given state. Multiple searches within a state (e.g., for nursing homes in different counties) for any one visit to the website were counted as only one visit. Figure D reports the number of visits daily from four days before the pilot launch to 12 days after the pilot launch.<sup>2</sup>

A clear spike in visits occurred in visits beginning the day the website was updated with the new information and continuing for three days. In the days preceding the pilot launch, the pilot state portions of the website received about 1000 visits per day. At the height of the spike, it increased to 10,000 visits. A similar, but much smaller, spike occurred in the other states' portions of Nursing Home Compare. In non-pilot states the increase was approximately twice the usual number of visits, compared to a ten-fold increase in the pilot states. This strongly suggests that the pilot launch was responsible for the increase in the Nursing Home Compare website visits.

The launch of the pilot program generated a considerable increase in people accessing CMS' nursing home information. This provides additional evidence that the nursing home quality initiative generated interest and obtained industry and consumer attention. The increase was probably due to media attention as both peaked during the initial launch period.

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<sup>2</sup> Software availability limited website visits to these days only.

### Online Satisfaction Survey.

Results from the online satisfaction survey of [www.medicare.gov](http://www.medicare.gov) users suggest a high level of satisfaction with the nursing home quality measure display. They also suggest a high level of demand for the nursing home quality information.

As part of [www.medicare.gov](http://www.medicare.gov)'s ongoing continuous quality improvement, a new customer satisfaction survey was implemented in August 2002. The survey was developed and analyzed by MSInteractive, a Division of Marketing Strategies Research. The invitation to complete the survey randomly "popped up" on users' screens as they exited predetermined pages on [www.medicare.gov](http://www.medicare.gov). The Nursing Home Compare home page was one of these pages. A total of 3,548 questionnaires were completed.

For the nursing home initiative, we added additional items to the end of the questionnaire concerning satisfaction with Nursing Home Compare and the nursing home quality measures. For both Nursing Home Compare as a whole and the quality measures, respondents were asked on a scale of 0 to 10 whether the information was: easy to search, what they were looking for, displayed clearly, understandable, and valuable.

All respondents were asked whether they had visited Nursing Home Compare and, if yes, whether they had looked at the quality information on nursing home compare. The results reported here are based on the 974 respondents that had visited Nursing Home Compare within the past month (874 had visited that day).<sup>3</sup> Of these, 67% (654) reported viewing the quality information.

Nursing Home Compare and the quality measure displays scored extremely high on all satisfaction measures (see Tables 2 and 3). On each measure approximately 40% of respondents rated the website and display a 10 with as many as 45% scoring the clarity of the quality measure display a 10. Similarly, the website and quality display received scores of 8 or higher from approximately 70% on all satisfaction measures.

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<sup>3</sup> This number should not be used to calculate the percentage of [www.medicare.gov](http://www.medicare.gov) users that visit Nursing Home Compare as Nursing Home Compare users represented a special sampling unit.



Table 2: Nursing Home Compare Ratings

Survey Questions	0 <sup>1</sup> - 4	5-7	8-9	10 Very Much Agree	Don't know	Total
Easy to Search For Information	10% (92)	17% (169)	31% (305)	39% (82)	3% (26)	974
Information I was Looking For	14% (133)	21% (200)	29% (282)	34% (31)	3% (28)	974
Information Displayed Clearly	6% (60)	17% (163)	33% (326)	42% (10)	2% (15)	974
Information Easy to Understand	8% (74)	17% (167)	33% (318)	41% (98)	2% (17)	974
Information was Valuable	9% (91)	17% (168)	29% (282)	42% (105)	3% (28)	974

<sup>1</sup> Respondents were asked to rate the information from 0 “very much disagree, to 10 “very much agree. For analysis purposes, 8-10 was considered “strongly agree.”

Table 3: Nursing Home Compare Quality Measures

Survey Questions	0 <sup>1</sup> - 4	7	8-9	10 Very Much Agree	Don't Know	Total
Easy to Search For Information	10% (66)	20% (130)	27% (176)	41% (266)	2% (16)	654
Information I was Looking For	12% (80)	21% (139)	28% (181)	37% (241)	2% (13)	654
Information Displayed Clearly	8% (51)	17% (110)	30% (193)	45% (292)	1% (8)	654
Information Easy to Understand	9% (59)	19% (122)	28% (186)	43% (278)	1% (9)	654
Information was Valuable	12% (75)	19% (123)	27% (175)	41% (266)	2% (15)	654

<sup>1</sup> Respondents were asked to rate the information from 0 “very much disagree, to 10 “very much agree. For analysis purposes, 8-10 was considered “strongly agree.”

The survey results not only demonstrated a high level of satisfaction with the quality measure display, but they also suggested a strong demand for the quality information among Nursing Home Compare users. Over two-thirds (67%) of users strongly agreed<sup>4</sup> that the information was valuable. Similarly, 64% strongly agreed that it was the “information I was looking for.” This represents a strong demand for this information that CMS needs to continue building and meeting.

## **Conclusions**

To conclude, we place the above reported results in the context of the research questions asked. First, there is evidence that the quality initiative is influencing nursing home to undertake quality improvement activities. Half of the nursing homes in the pilot states requested QIO assistance. Seventy-eight percent of facilities made changes or intend to make changes in their process as part of quality improvement activities. Three-quarters of these facilities indicated that the pilot was in part responsible for their decision to undertake these activities. Furthermore, nursing homes that attended the workshops were significantly more likely to have made quality improvement changes in the last six months.

Second, there is evidence that the target audiences were reached. The survey of nursing homes provides clear evidence that people responsible for quality improvement within nursing homes were reached by this activity. Media and program monitoring and the increase in inquiries to Medicare’s help-line and website suggest that consumers and information intermediaries were potentially reached.

Third, the campaign increased people’s seeking of nursing home quality information. Both the website and the help-line experienced marked increases in requests for nursing home information during the pilot launch.

Fourth, results from studies designed to assess how different audiences use the information are not yet available. The online satisfaction survey suggests that the information CMS is providing is what consumers are looking for, is understandable, and is valuable. As further studies are conducted, we will continue to refine this already highly rated information.

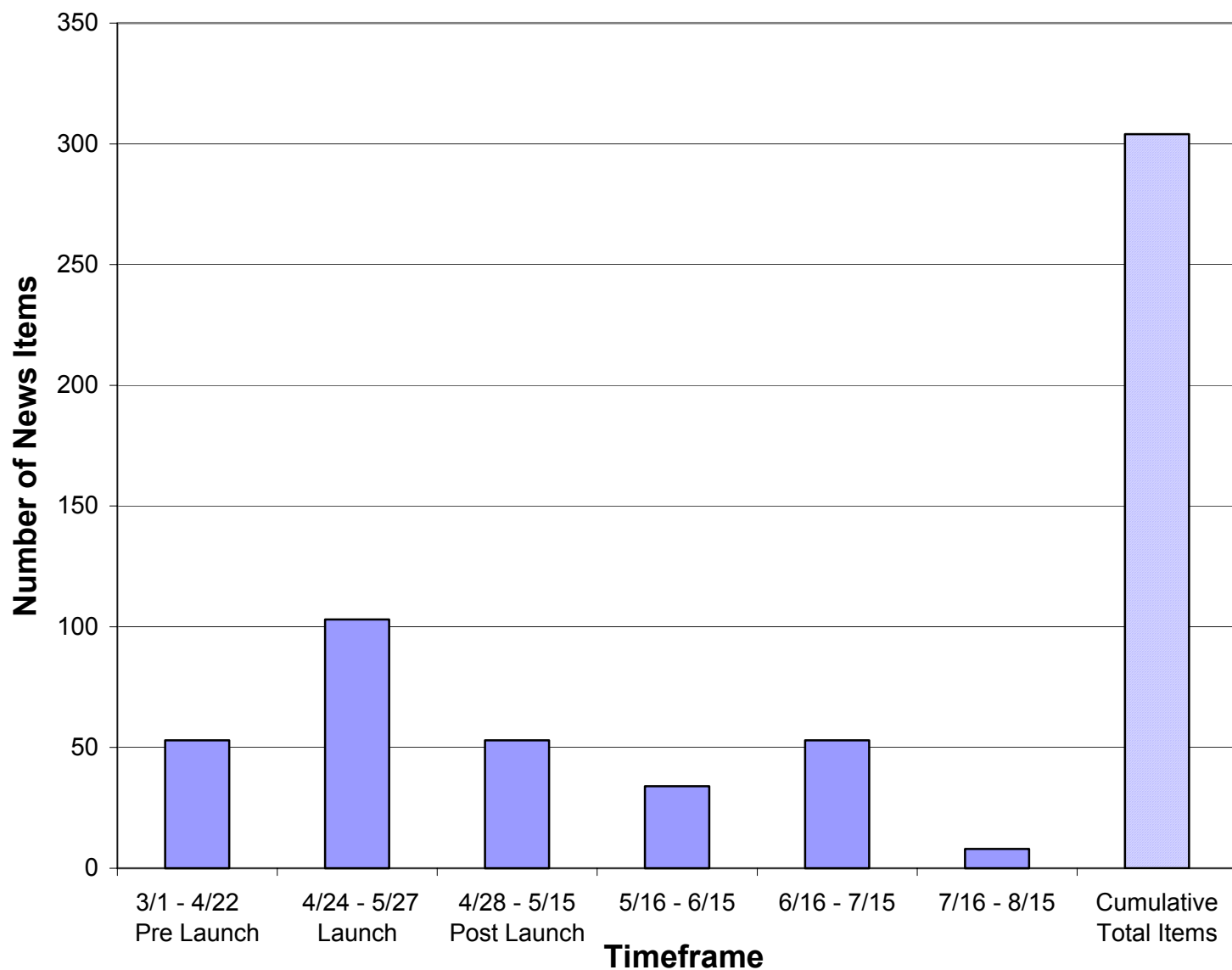
Lastly, the nursing home survey provides some evidence that the information intermediary strategy is starting to work. Nursing homes are reporting an increase in discussions concerning quality improvement with referral sources.

In sum, these data demonstrate that the NHQI Pilot was effective in promoting quality improvement activities among nursing homes and stimulating consumers to access quality information which they find useful. The results presented in this report are being used to guide CMS in national implementation of NHQI, and to guide evaluation plans for the national Initiative.

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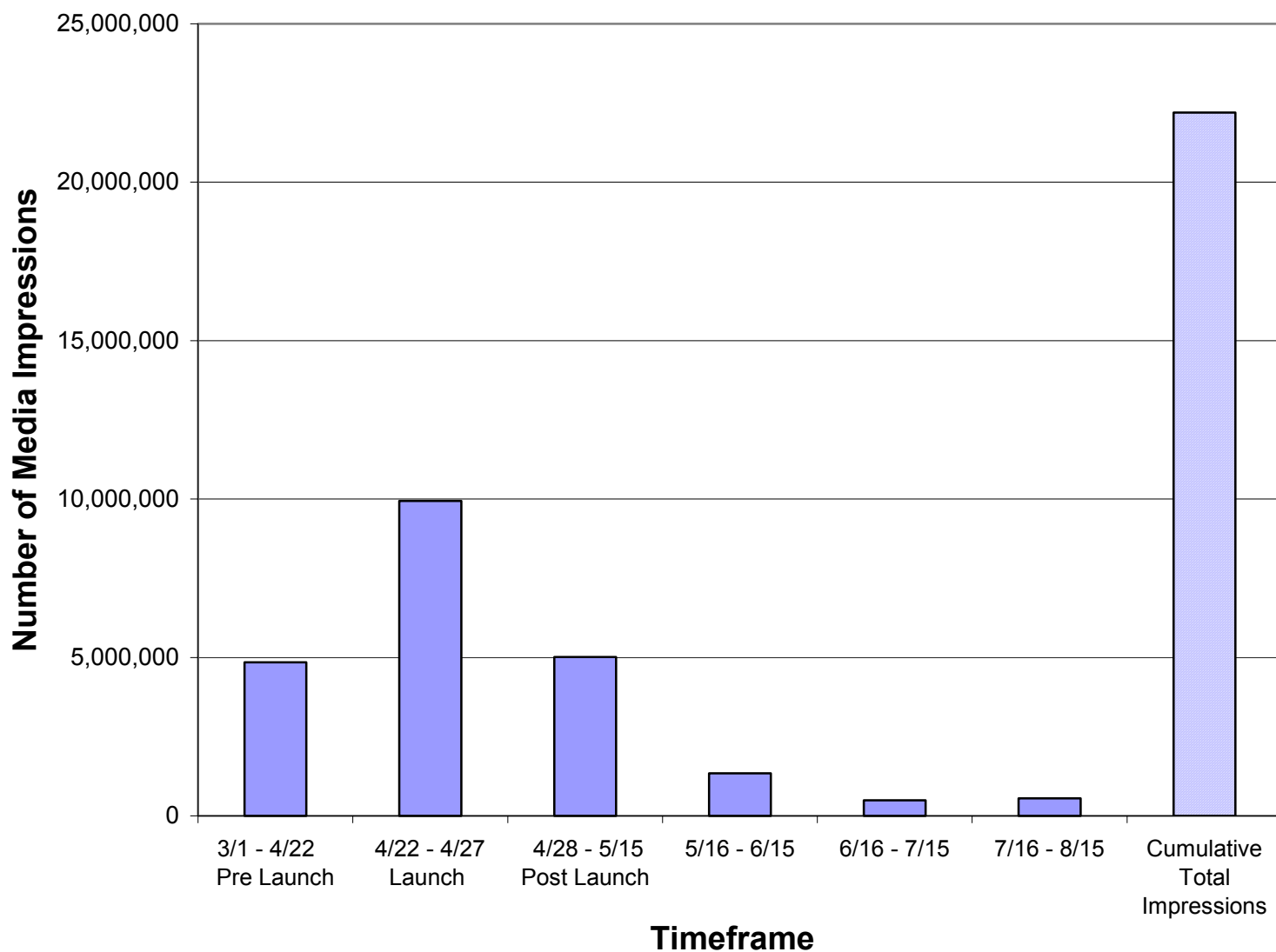
<sup>4</sup> The percentages in this paragraph represent those that rated the items 8 or higher on a scale from 0 to 10.

**Figure A:**  
**News Coverage<sup>1</sup> Totals: Pre Launch Through August 15, 2002**



<sup>1</sup> News Coverage represents coverage on TV, radio, as well as print media.

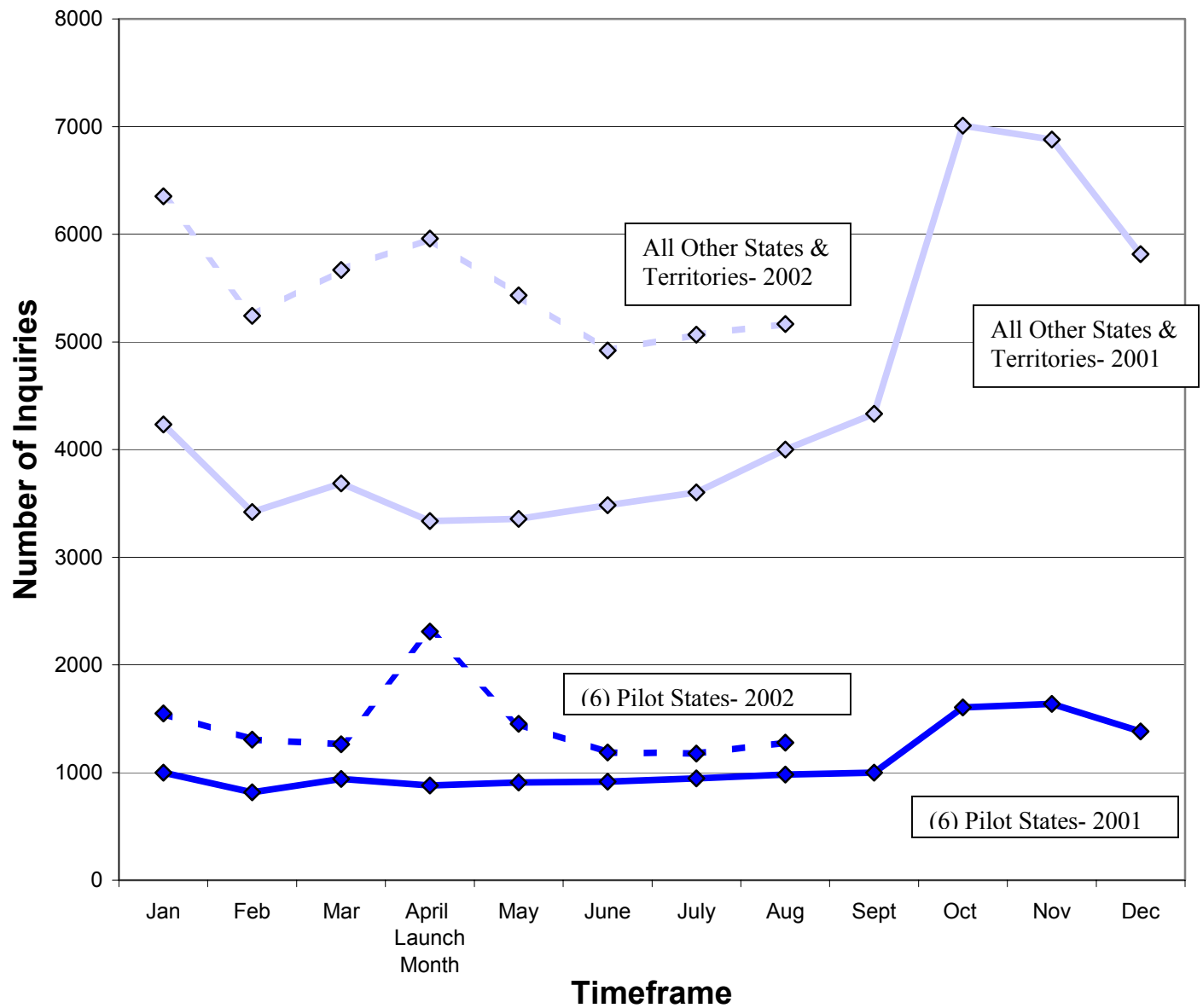
**Figure B:**  
**Media Impression<sup>1</sup> Totals: Pre Launch Through August 15,<sup>2</sup> 2002**



<sup>1</sup> Media Impression is used to represent TV viewership, radio listenership, and print media circulation.

<sup>2</sup> Totals represent an under estimation of reach as viewership, listenership, and circulation information was not available for 87 media placements.

**Figure C:**  
**1-800 MEDICARE Inquiries on Nursing Home Topics:**  
**Pilot States and Other States By Month During 2001 and 2002**



**Figure D:**  
**Nursing Home Compare Website Visits:**  
**Pilot States and Other States**

